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09/994,388	11/26/2001	Ronald R. Williams	WILLIAMS#7	8481

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W. Edward Johansen
11661 San Vicente Boulevard
Los Angeles, CA 90049

EXAMINER

NGUYEN, LUONG TRUNG

ART UNIT	PAPER NUMBER
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2622

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/994,388	Applicant(s) WILLIAMS, RONALD R.	
	Examiner LUONG T. NGUYEN	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-5 and 7-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-5, 7-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 1/22/2008 have been fully considered but they are not persuasive.

In re page 12, Applicant argues that Krauter does not teach a plurality of lamps disposed at a distal end of the housing.

In response, regarding claim 15, the applicant recited claim 15 with the limitation “a plurality of lamps coupled to said housing at said distal end.” The Examiner considers that Krauter does not disclose this feature, however, Fukami discloses this feature. Fukami discloses lamps 4 and 4' located at distal end of an endoscope (figure 3, column 4, lines 50-65).

In re page 12, Applicant argues that while Fukami teaches lamps that are located at distal end of an endoscope there is no room for a pair of lamps in the endoscope of Krauter.

In response, it should be noted that the feature “there is no room for a pair of lamps in the endoscope of Krauter” is not supportable by evidence and merely conjecture on the part of applicant. The fact remains that multiple lamps placed in the distal ends of endoscopes is well known in the prior art, and that one of ordinary skill in the art would have therefore found it obvious to place more than one lamp at the distal end.

In re page 12, Applicant argues that the applicant has amended claims 15 and 17 to include the limitation that the pair of lamps is directed perpendicular to the housing.

In response, it should be noted that claims 15 and 17 have not been amended to include the limitation “the pair of lamps is directed perpendicular to the housing”.

In re page 12, Applicant argues that the feature “the lamps are directed perpendicular to the housing” is now recited in the claims 15 and 17.

In response, it should be noted that the feature “the lamps are directed perpendicular to the housing” is not recited in the claims 15 and 17. Instead, claim 15 only recites limitation “wherein said lamps are aligned with said housing”.

Claim Objections

2. Claims 11-12 are objected to because of the following informalities:

Claim 11 (line 2), “to claim 17” should be changed to --to claim 15--.

Claim 12 (line 2), “to claim 17” should be changed to --to claim 15--.

It should be noted that claims 11 and 12 dependent from claim 15 as amended in amendment filed on 11/27/2006.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 5-7, 10, 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krauter (US 5,191,879) in view of Fukami et al. (US 3,730,175) and Kinoshita et al. (US 3,804,081) further in view of Lemmey (US 4,915,626).

Regarding claim 15, Krauter discloses an endoscope comprising:

a housing (head 16, figures 2-3, column 3, lines 33-42) having an elongated cavity having a proximal end and a distal end;

a fixed lens system (focus lens 28, figure 2, column 3, lines 42-49) disposed within said elongated cavity whereby said fixed lens system is able to direct a beam of light from a cavity (noted that the focus camera system 20 disposed within the viewing head 16 of the borescope insertion tube 15, figure 2, column 3, lines 32-42, the borecope is an instrument for examining the interior of a body canal or hollow organ; this indicates that focus lens 28 is able to direct a beam of light from a cavity);

an adjustably focusing lens and CCD camera system (CCD camera 21 inherently included a focusing lens, figure 2, column 3, lines 33-49) disposed within said elongated cavity whereby said adjustably focusing lens and CCD camera system is able to receive said beam light from the cavity;

a mechanism coupled to said housing whereby said mechanism bi-directionally drive said adjustably focusing lens and CCD camera system laterally to produce back and forth lateral movements (a mechanism is included in head 16 for moving sleeve 23, back and forth, figure 2, column 3, lines 33-49; the CCD camera 21 is attached to sleeve 23; this indicates that the mechanism laterally drives CCD camera 21 back and forth).

Krauter fails to specifically disclose a plurality of lamps mechanically coupled to said housing at said distal end wherein said lamps are aligned with said housing. However, Fukami et al. teaches an endoscope, which includes two lamps 4 and 4' located inside the endoscope and are aligned with the housing of the endoscope (figure 3, column 4, lines 50-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Krauter by the teaching of Fukami et al. in order to increase the intensity of the illumination light, which illuminates an object.

Krauter and Fukami et al. fail to specifically disclose the beam of light is perpendicular to the housing and a device for directing said beam of light from the cavity perpendicular to said elongated cavity. However, Kinoshita et al. teaches an endoscope that includes a prism 4, which directs light from the cavity perpendicular to elongated tube 1, figure 1, column 2, lines 32-42). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Krauter and Fukami et al. by the teaching of Kinoshita et al. in order to obtain an endoscope which can examine body cavity walls, which parallel to the axis of an elongated cavity (the optical axis of objective lens).

Krauter, Fukami et al. and Kinoshita et al. fail to specifically disclose a dental video camera. However, Lemmey teaches a video endoscope, which includes camera and lens, is manipulated by dentist or dental surgeons (figures 1-2, column 1, lines 11-23). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Krauter, Fukami et al. and Kinoshita et al. by the teaching of Lemmey in order to obtain a video dental camera, which is used by dentist or dental surgeons.

Regarding claims 2, 7, Kinoshita et al. discloses a pentaprism (prism 5, figure 1, column 2, lines 30-42) which optically couples said adjustable CCD camera system to said fixed focusing lens system and which is disposed in said elongated cavity of said housing at said distal end.

Regarding claims 5, 10, Krauter disclose a transmitter (video wires 22, figure 2, column 3, lines 33-43) disposed in said housing whereby said transmitter transmits the video output of said dental video camera. Fukami et al. discloses a battery disposed in said housing (since Fukami et al. discloses two lamps 4 and 4' are located inside housing, a battery is included in the housing to provide power to the lamps, figure 3, column 4, lines 50-60).

Regarding claim 16, Krauter discloses wherein said adjustably focusing lens and CCD camera includes:

- a sleeve (sleeve 23, figure 2, column 3, lines 33-49) slidably coupled to said housing within said elongated cavity whereby said sleeve is able to move laterally back and forth;

- an adjustable fixed lens system CCD (a focusing lens is inherently included in camera 21, figure 2, column 3, lines 33-49) disposed within said sleeve whereby said sleeve is coupled to said mechanism;

- a charge-coupled device (CCD camera 21, figure 2, column 3, lines 33-49) disposed within said sleeve whereby said sleeve laterally moves said adjustably focusing lens and CCD camera system back and forth in order to change the position of said adjustably focusing lens and CCD camera system with respect to said fixed lens system thereby changing the field of focus.

Regarding claim 17, Krauter discloses an endoscope comprising:

a housing (head 16, figures 2-3, column 3, lines 333-42) having an elongated cavity having a proximal end and a distal end;

a fixed lens system (focus lens 28, figure 2, column 3, lines 42-49) disposed within said elongated cavity whereby said fixed lens is able to direct a beam of light;

an adjustable CCD camera system (CCD camera 21, figure 2, column 3, lines 33-49) disposed within said elongated cavity;

a mechanism coupled to said housing whereby said mechanism bi-directionally drive said adjustable CCD camera system laterally to produce back and forth lateral movements (a mechanism is included in head 16 for moving sleeve 23 back and forth, figure 2, column 3, lines 33-49; the CCD camera 21 is attached to sleeve 23, this indicates that the mechanism laterally drives CCD camera 21 back and forth).

Krauter fails to specifically disclose a plurality of lamps mechanically coupled to said housing at said distal end. However, Fukami et al. teaches an endoscope, which includes two lamps 4 and 4' located inside the endoscope (figure 3, column 4, lines 50-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Krauter by the teaching of Fukami et al. in order to increase the intensity of the illumination light, which illuminates an object.

Krauter and Fukami et al. fail to specifically disclose a device for directing said beam of light to said elongated cavity. However, Kinoshita et al. teaches an endoscope that includes a prism 4, which directs light from the cavity perpendicular to elongated tube 1, figure 1, column 2, lines 32-42). Therefore, it would have been obvious to one of ordinary skill in the art at the

Art Unit: 2622

time the invention was made to modify the device in Krauter and Fukami et al. by the teaching of Kinoshita et al. in order to obtain an endoscope which can examine body cavity walls, which parallel to the axis of an elongated cavity (the optical axis of objective lens).

Krauter, Fukami et al. and Kinoshita et al. fail to specifically disclose a dental video camera. However, Lemmey teaches a video endoscope, which includes camera and lens, is manipulated by dentist or dental surgeons (figures 1-2, column 1, lines 11-23). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Krauter, Fukami et al. and Kinoshita et al. by the teaching of Lemmey in order to obtain a video dental camera, which is used by dentist or dental surgeons.

Regarding claim 18, Krauter discloses wherein said adjustably focusing lens and CCD camera includes:

a sleeve (sleeve 23, figure 2, column 3, lines 33-49) slidably coupled to said housing within said elongated cavity whereby said sleeve is able to move laterally back and forth;

a charge-coupled device (CCD camera 21, figure 2, column 3, lines 33-49) disposed within said sleeve whereby said sleeve laterally moves said CCD camera system back and forth in order to change the position of said charge-couple device with respect to said fixed lens system thereby changing the field of focus.

Regarding claim 19, Krauter discloses wherein said adjustably focusing lens and CCD camera includes:

a sleeve (sleeve 23, figure 2, column 3, lines 33-49) slidably coupled to said housing within said elongated cavity whereby said sleeve is able to move laterally back and forth;

an adjustably focusing lens (a focusing lens is inherently included in camera 21, figure 2, column 3, lines 33-49) disposed within said sleeve whereby said sleeve laterally moves said adjustably focusing lens back and forth in order to change the position of said charge couple device with respect to said CCD camera system thereby changing the field of focus.

5. Claims 3-4, 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krauter (US 5,191,879) in view of Fukami et al. (US 3,730,175) and Kinoshita et al. (US 3,804,081) further in view of Lemmey (US 4,915,626) and Cooper et al. (US 5,051,823).

Regarding claims 3, 4, 8, 9, Krauter, Fukami et al., Kinoshita et al. and Lemmey fail to specifically disclose each of said lamps comprises a light emitting diode, whereby said light emitting diode provides a beam of light perpendicular to said housing. However, Cooper et al. teaches a video dental camera, which includes a laser diode for emitting light (column 2, lines 50-59; column 5, lines 65-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Krauter, Fukami et al., Kinoshita et al. and Lemmey by the teaching of Cooper et al. in order to provide a dental instrument, which allows the dental practitioner to direct laser energy to a desired location within a patient's mount (column 3, lines 34-37).

6. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krauter

Art Unit: 2622

(US 5,191,879) in view of Fukami et al. (US 3,730,175) and Kinoshita et al. (US 3,804,081) and Lemmey (US 4,915,626) further in view of Kobayashi (US 4,755,873).

Regarding claims 11, 13, Krauter, Fukami et al., Kinoshita et al. and Lemmey fail to specifically disclose a plurality of external switches mechanically coupled to said housing; and a cable having a plurality of wires each of which connect each of said switches to one of a group of electronic devices that consists of a video processor, a recording device and a thermal printer. However, Kobayahsi teaches an endoscope system, which includes plurality of switches 24, 25, 27, 28, 29 coupled to control section 22 and universal cord 15 (figure 1, column 54-65). The universal cord 15 connects switches 24, 25, 27, 28, 29 to video-signal processing unit 30 (figure 1, column 3, line 54 – column 4, line 21). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Krauter, Fukami et al., Kinoshita et al. and Lemmey by the teaching of Kobayahsi in order to provide operation switches on the device. This allows an operator operates a desired function.

Regarding claims 12, 14, Krauter, Fukami et al., Kinoshita et al. and Lemmey fail to specifically disclose a plurality of external switches mechanically coupled to said housing; a plurality of external switches mechanically coupled to said housing; a multiple pin male connector having a plurality of pins and mechanically coupled to said housing wherein each of said pins electrically coupled to one of said external switches; a female multiple pin connector having a plurality of pins and mechanically coupled to said multiple pin male connector; and a cable having a plurality of wires each of which is electrically connected to one of said pins of

Art Unit: 2622

said multiple pin female connector wherein each of said wires is electrically to one of a group of electronic devices that consists of a video processor, a recording device and a thermal printer.

However, Kobayahsi teaches an endoscope system, which includes plurality of switches 24, 25, 27, 28, 29 coupled to control section 22 and universal cord 15 (figure 1, column 54-65). The universal cord 15 connects switches 24, 25, 27, 28, 29 to video-signal processing unit 30 (figure 1, column 3, line 54 – column 4, line 21). Kobayashi also discloses a receptacle 36 with electrical portion 37 (female multiple pin connector) is connected to terminal portion 17 (multiple pin male connector), figures 2-3, column 3, line 54 – column 4, line 20. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Krauter, Fukami et al., Kinoshita et al. and Lemmey by the teaching of Kobayahsi in order to provide operation switches on the device. This allows an operator operates a desired function.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUONG T. NGUYEN whose telephone number is (571) 272-7315. The examiner can normally be reached on 7:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID L. OMETZ can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David L. Ometz/
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2622

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04/07/08